

12/17/01

WHAT IS CLAIMED IS:

*sub A1*

1. A multi-wavelength laser source (MWLS) system, comprising:
  - (a) first and second monochromatic lasers having first ( $f_1$ ) and second ( $f_2$ ) lasing frequencies, respectively;
  - (b) means for amplifying combined signals of said first and second lasers;
  - (c) means for multiplying the amplified combined signals to yield comblike multi-channel WDM laser signals separated from each other by a frequency equal to the difference between  $f_1$  and  $f_2$ .
2. The system as defined in claim 1, said means for multiplying comprising a plurality of serially interconnected optical fiber sections each having predetermined propagation characteristics for said amplified combined signals.
3. The system as defined in claim 2, said predetermined propagation characteristics being propagation mode, dispersion and length.
4. The system as defined in claim 3, said plurality of serially interconnected fiber sections being five having lengths  $L_1$ ,  $L_2$ ,  $L_3$ ,  $L_4$  and  $L_5$ , respectively,  $L_1$  being the first section, and  $L_5$  being the last section.
5. The system as defined in claim 4, the third fiber section being a single mode fiber (SMF) section.
- X 6. The system as defined in claim 5, the first, second, fourth and ~~fifth~~ fiber section being dispersion shifted fiber (DSF) sections.

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7. The system as described in claim 6, which  $L_1 = 1.1 \text{ km}$ ,  $L_2 = 1.1 \text{ km}$ ,  $L_3 = 20 \text{ m}$ ,  $L_4 = 1 \text{ km}$  and  $L_5 = 1 \text{ km}$ .
8. The system as defined in claim 7, said fine fiber section, having associated dispersion value,  $D_1$  to  $D_5$  as follows:  $D_1 = -0.399$ ;  $D_2 = 0.402$ ;  $D_3 = 16$ ;  $D_4 = 0.402$  and  $D_5 = -0.399$ , all in units of ps/km/nm.
9. The system as described in claim 8, wherein  $f_1$  and  $f_2$  correspond to wavelengths in the vicinity of 1550 nm.
10. A method of reducing stimulated Brillouin scattering (SBS) in a system as defined in claim 2, comprising the step of modulating said first and second monochromatic lasers by a very low frequency signal.

*112<sup>nd</sup> do not provide any  
no method step here  
only single step*